WHAT IS CLAIMED IS:

1. A rubbery polymer having improved properties, which is comprised of repeat units which are comprised of (a) butyl acrylate, or optionally a mixture of butyl acrylate and 2-ethylhexyl acrylate containing up to about 40 percent 2-ethylhexyl acrylate, (b) at least one member selected from the group consisting of methyl methacrylate, ethyl methacrylate, methyl acrylate, and ethyl acrylate, (c) optionally, about 0% to about 40% of an alkoxy ethyl acrylate or an alkoxy ethyl methacrylate, (d) acrylonitrile, (e) styrene, and (f) a crosslinking agent; wherein about 1% to about 10% of a monomer containing reactive cure sites selected from the group consisting of hydroxyl groups, glycidyl groups, carboxylic acid groups, and unsaturated cure sites is incorporated into the rubbery polymer.

2. A rubbery polymer as specified in claim 1 which is comprised of repeat units which are derived from (a) about 40 to about 80% by weight butyl acrylate, or optionally a mixture of butyl acrylate and 2-ethylhexyl acrylate containing up to 40% by weight 2-ethylhexyl acrylate, (b) from about 5 to about 35% by weight methyl methacrylate, ethyl methacrylate, methyl acrylate, or ethyl acrylate, (c) optionally, about 0 to about 40% of an alkoxy ethyl acrylate or an alkoxy ethyl methacrylate, (d) from about 4 to about 30% by weight acrylonitrile, (e) from about 3 to about 25% by weight styrene, (f) from about 0.25 to about 8% by weight of a crosslinking agent, and (g) from about 1% to about 10% by weight of the monomer containing reactive cure sites.

3. A rubbery polymer as specified in claim 1 which is comprised of repeat units which are derived from (a) about 50 to about 80% by weight butyl acrylate, or optionally a mixture of butyl acrylate and 2-ethylhexyl acrylate containing up to about 40% 2-ethylhexyl acrylate, (b) from about 3 to about 25% by weight of at least one member selected from the group consisting of methyl methacrylate, ethyl methacrylate, methyl acrylate, and ethyl acrylate, (c) optionally about 0 to about 40% of an alkoxy ethyl acrylate or an alkoxy ethyl methacrylate, (d) from about 6 to about 30% by weight acrylonitrile, (e) from about 5 to about 18% by weight styrene, (f) from about 0.5 to about 4% by weight of a crosslinking agent, and (g) from about 1% to about 8% by weight of the monomer containing reactive cure sites.

4. A rubbery polymer as specified in claim 1 which is comprised of repeat units which are derived from (a) from about 55 to about 75% by weight butyl acrylate, or optionally a mixture of butyl acrylate and 2-ethylhexyl acrylate containing up to about 40% 2-ethylhexyl acrylate, (b) from about 5 to about 20% by weight of at least one member selected from the group consisting of methyl methacrylate, ethyl methacrylate, methyl acrylate, and ethyl acrylate, (c) optionally, about 0 to about 40% of an alkoxy ethyl acrylate or an alkoxy ethyl methacrylate, (d) from about 10 to about 25% by weight acrylonitrile, (e) from about 8 to about 14% by weight styrene, (f) from about 1 to about 3% by weight of a crosslinking agent, and (g) from about 2% to about 6% by weight of the monomer containing reactive cure sites.

5. A rubbery polymer as specified in claim 1 wherein the monomer containing reactive cure sites is selected from the group consisting of hydroxyethyl acrylate and hydroxyethyl methacrylate.

6. A rubbery polymer as specified in claim 1 wherein the monomer containing reactive cure sites is selected from the group consisting of acrylic acid and methacrylic acid.

7. A rubbery polymer as specified in claim 1 wherein the monomer containing reactive cure sites is selected from the group consisting of glucidyl methacrylate and allyl glycidyl ether.

8. A rubbery polymer as specified in claim 1 wherein the monomer containing reactive cure sites is selected from the group consisting of dicyclopentenyl acrylate and dicyclopentenyloxyethyl methacrylate.

9. A leathery composition which is useful in automotive applications, which is comprised of (1) a thermoplastic, (2) a plasticizer, and (3) a rubbery polymer as specified in claim 1.

10. A leathery composition as specified in claim 9 wherein the thermoplastic resin is polyvinyl chloride.

11. A leathery composition as specified in claim 9 wherein the thermoplastic resin is a polyolefin.

12. A leathery composition as specified in claim 11 wherein the polyolefin is high density polyethylene.

13. A leathery composition as specified in claim 11 wherein the polyolefin is a metallocene catalyzed polyolefin.

14. A process for preparing a rubbery polymer which can be blended with thermoplastics to make leathery compositions having good heat and ultraviolet light resistance, said process comprising the steps of (1) polymerizing (a) butyl acrylate, or optionally a mixture of butyl acrylate and 2-ethylhexyl acrylate containing up to about 40% 2-ethylhexyl acrylate, (b) at least one member selected from the group consisting of methyl methacrylate, ethyl methacrylate, methyl acrylate, and ethyl acrylate, (c) optionally about 0% to about 40% of alkoxy ethyl me(acrylate),(d) acrylonitrile, and (e) a crosslinking agent; wherein about 1% to about 10% of a monomer containing reactive cure sites selected from the group consisting of hydroxyl groups, glycidyl groups, carboxylic acid groups, and unsaturated cure sites is incorporated into the rubbery polymer under emulsion polymerization conditions to produce a seed polymer containing latex; (2) adding (a) styrene, (b) additional acrylonitrile, and (c) additional crosslinking agent to the seed polymer containing latex under emulsion polymerization conditions which result in the formation of an emulsion containing the rubbery polymer; (3) recovering the rubbery polymer from the emulsion containing the rubbery polymer.

15. A process as specified in claim 14, wherein the rubbery polymer is polymerized using a two-step batch, semi-continuous, or continuous emulsion polymerization process.

16. A process as specified in claim 14, wherein in step (2) from about 4 parts by weight to about 30 parts by weight of styrene, from about 1 part by weight to about 20 parts by weight of acrylonitrile and from about 0.01 parts by weight to about 2 parts by weight of the crosslinking agent are added to the seed polymer per 100 parts dry weight of the seed polymer.

17. A process as specified in claim 14, wherein the crosslinking agent utilized in step (1) is 1,4-butanediol dimethacrylate.

18. A process as specified in claim 14, wherein the crosslinking agent utilized in step (2) is divinylbenzene.

19. A process as specified claim 14 which further comprises drying the rubbery polymer after it has been deodorized and washed, and subsequently converting it into powder.

20. A process as specified in claim 19 wherein the rubbery polymer is converted to a powder in the presence of a partitioning agent selected from the group consisting of calcium carbonate, polyvinyl chloride, and silica.